honors algebra 2

Daily Course Lesson Plan

On the pages that follow is a daily lesson guide for you and your student to follow in order to stay on track with Thinkwell's Honors Algebra 2 coursework.

Under each week's header you'll see which chapters are covered along with each day's assignments for that week. The duration for each topic's video lesson is also noted. Feel free to work as quickly or as slowly through the content as is appropriate for your student's learning style.

We suggest printing this daily lesson plan and keeping it handy. Please let us know if you have any questions about the content here. Email us at support@thinkwell.com.

Welcome to Thinkwell's Homeschool Honors Algebra 2!

Thank you for making us part of your homeschool curriculum. This 36-week daily lesson plan is meant to be a guide for you and your homeschool student. Feel free to modify this plan to suit your individual needs.

As described below, each day your student will study a different topic and all the materials associated with that topic, such as video lectures, exercises, and worksheets. Expect to spend about an hour to an hour and a half per day on the content suggested here.

If you follow our day-by-day schedule, you'll complete the full curriculum for the course in 36 weeks. Please let us know if we can assist you with any of the material here. We're happy to be your partner in thinking well.

Suggested Weekly Pacing Guide:

	, 3
Week 1	1.1 Properties and Operations
Week 2	1.2 Introduction to Functions
Week 3	Test – 1.1 & 1.2 🔷 2.1 Linear Equations and Inequalities
Week 4	2.1 Linear Equations and Inequalities (Cont.) 🔷 2.2 Applying Linear Functions
Week 5	2.2 Applying Linear Functions (Cont.) Test – 2.1 & 2.2 3.1 Linear Systems in Two Dimensions
Week 6	3.1 Linear Systems in Two Dimensions (Cont.)
Week 7	3.2 Linear Systems in Three Dimensions (Cont.) Test – 3.1 & 3.2
Week 8	4.1 Matrix Operations
Week 9	4.2 Using Matrices to Solve Systems
Week 10	Test – 4.1 & 4.2 🔷 5.1 Quadratic Functions and Complex Numbers
Week 11	5.1 Quadratic Functions and Complex Numbers (Cont.) 5.2 Applying Quadratic Functions
Week 12	5.2 Applying Quadratic Functions (Cont.) Test – 5.1 & 5.2
Week 13	6.1 Operations with Polynomials
Week 14	6.1 Operations with Polynomials (Cont.)
Week 15	6.2 Roots and Graphs of Polynomial Functions (Cont.)

Week 16	Test – 6.1 & 6.2 🔷 7.1 Exponential Functions and Logarithms
Week 17	7.1 Exponential Functions and Logarithms (Cont.)
Week 18	7.2 Applying Exponential and Logarithmic Functions (Cont.) Test – 7.1 & 7.2
Week 19	Exam – Modules 1-17 🔷 8.1 Rational Functions
Week 20	8.1 Rational Functions (Cont.) ♦ 8.2 Radical Functions
Week 21	8.2 Radical Functions (Cont.)
Week 22	Test – 8.1 & 8.2 🔷 9.1 Functions and Their Graphs
Week 23	9.1 Functions and Their Graphs (Cont.) 🔷 9.2 Functional Relationships
Week 24	9.2 Functional Relationships (Cont.) Test – 9.1 & 9.2 10.1 Understanding Conic Sections
Week 25	10.1 Understanding Conic Sections (Cont.)
Week 26	10.2 Applying Conic Sections
Week 27	Test – 10.1 & 10.2 🔷 11.1 Probability
Week 28	11.1 Probability (Cont.) 🔷 11.2 Data Analysis and Statistics
Week 29	11.2 Data Analysis and Statistics (Cont.) Test – 11.1 & 11.2 12.1 Exploring Arithmetic Sequences and Series
Week 30	12.1 Exploring Arithmetic Sequences and Series (Cont.) • 12.2 Exploring Geometric Sequences and Series
Week 31	12.2 Exploring Geometric Sequences and Series (Cont.) Test – 12.1 & 12.2 13.1 Introduction to Trigonometric Functions
Week 32	13.1 Introduction to Trigonometric Functions (Cont.)
Week 33	13.2 Applying Trigonometric Functions
Week 34	Test – 13.1 & 13.2 🔷 14.1 Exploring Trigonometric Graphs
Week 35	14.2 Trigonometric Identities
Week 36	14.2 Trigonometric Identities (Cont.) Test – 14.1 & 14.2 Exam – Modules 19-35

Suggested Daily Pacing Guide:

Week 1 1.1 Properties and Operations

Assignments	Notes
Week 1, Day 1 ☐ 1.1.1 Sets of Numbers (12:28) ☐ 1.1.2 Properties of Real Numbers (9:45)	
Week 1. Day 2 ■ 1.1.3 Square Roots (13:36) ■ 1.1.4 Simplifying Algebraic Expressions (13:22)	
Week 1, Day 3 1.1.5 Properties of Exponents and Scientific Notation (12:08)	
Week 1, Day 4 1.1 Review Worksheet: Properties and Operations, Parts 1 and 2	
Week 1, Day 5 ☐ Quiz - 1.1	Score:

Week 2 1.2 Introduction to Functions

Assignments	Notes
Week 2, Day 1 ☐ 1.2.1 Relations and Functions (8:25) ☐ 1.2.2 Function Notation (13:34)	
Week 2, Day 2 ■ 1.2.3 Exploring Transformations (13:38) ■ 1.2.4 Introduction to Parent Functions (9:50)	
Week 2, Day 3 ■ 1.2 Review Worksheet: Introduction to Functions	
Week 2, Day 4 ☐ Quiz – 1.2	Score:
Week 2, Day 5 Practice Test – 1.1 & 1.2	

Week 3 Test − 1.1 & 1.2 ◆ 2.1 Linear Equations and Inequalities

Assignments	Notes
Week 3, Day 1 ■ Test – 1.1 & 1.2	Score:
Week 3, Day 2 ■ 2.1.1 Solving Linear Equations and Inequalities (18:48) ■ 2.1.2 Proportional Reasoning (12:12)	
Week 3, Day 3 2.1.3 Graphing Linear Functions (17:50)	
Week 3, Day 4 2.1.4 Writing Linear Functions (20:42)	
Week 3, Day 5 ■ 2.1.5 Linear Inequalities in Two Variables (17:00)	

Week 4 2.1 Linear Equations and Inequalities (Cont.) ◆ 2.2 Applying Linear Functions

Assignments	Notes
Week 4, Day 1 ■ 2.1 Review Worksheet: Linear Equations and Inequalities, Parts 1 and 2	
Week 4, Day 2 ☐ Quiz - 2.1	Score:
Week 4, Day 3 □ 2.2.1 Transforming Linear Functions (14:34) □ 2.2.2 Curve Fitting With Linear Models (18:48)	
Week 4, Day 4 ☐ 2.2.3 Solving Absolute-Value Equations and Inequalities (26:25)	
Week 4, Day 5 ■ 2.2.4 Absolute-Value Functions (15:14)	

Week 5 2.2 Applying Linear Functions (Cont.) ◆ Test – 2.1 & 2.2 ◆ 3.1 Linear Systems in Two Dimensions

Assignments	Notes
Week 5, Day 1 ■ 2.2 Review Worksheet: Applying Linear Functions	
Week 5, Day 2 ☐ Quiz - 2.2	Score:
Week 5, Day 3 ☐ Practice Test – 2.1 & 2.2	
Week 5, Day 4 ☐ Test - 2.1 & 2.2	Score:
Week 5, Day 5 ■ 3.1.1 Using Graphs and Tables to Solve Linear Systems (17:48)	

Week 6 3.1 Linear Systems in Two Dimensions (Cont.) ◆ 3.2 Linear Systems in Three Dimensions

Assignments	Notes
Week 6, Day 1 ■ 3.1.2 Using Algebraic Methods to Solve Linear Systems (21:33)	
Week 6, Day 2 3.1.3 Solving Systems of Linear Inequalities (21:11) 3.1.4 Linear Programming (25:49)	
Week 6, Day 3 3.1 Review Worksheet: Linear Systems in Two Dimensions	
Week 6, Day 4 Quiz - 3.1	Score:
Week 6, Day 5 ■ 3.2.1 Linear Equations in Three Dimensions (12:04)	

Week 7 3.2 Linear Systems in Three Dimensions (Cont.) ◆ Test – 3.1 & 3.2

Assignments	Notes
Week 7, Day 1 ■ 3.2.2 Solving Linear Systems in Three Variables (23:13)	
Week 7, Day 2 3.2 Review Worksheet: Linear Systems in Three Dimensions	
Week 7, Day 3 ☐ Quiz - 3.2	Score:
Week 7, Day 4 Practice Test – 3.1 & 3.2	
Week 7, Day 5 ■ Test – 3.1 & 3.2	Score:

Week 8 4.1 Matrix Operations

Assignments	Notes
Week 8, Day 1 ■ 4.1.1 Matrices and Data (13:56)	
Week 8, Day 2 ☐ 4.1.2 Multiplying Matrices (16:39)	
Week 8, Day 3 ☐ 4.1.3 Using Matrices to Transform Geometric Figures (16:03)	
Week 8, Day 4 ☐ 4.1 Review Worksheet: Matrix Operations	
Week 8, Day 5 ☐ Quiz – 4.1	Score:

Week 9 4.2 Using Matrices to Solve Systems

Assignments	Notes
Week 9, Day 1 ■ 4.2.1 Determinants and Cramer's Rule (32:39)	
Week 9, Day 2 ■ 4.2.2 Matrix Inverses and Solving Systems (17:31)	
Week 9, Day 3 ☐ 4.2.3 Row Operations and Augmented Matrices (18:55)	
Week 9, Day 4 4.2 Review Worksheet: Using Matrices to Solve Systems	
Week 9, Day 5 ☐ Quiz - 4.2	Score:

Week 10 Test − 4.1 & 4.2 ◆ 5.1 Quadratic Functions and Complex Numbers

Assignments	Notes
Week 10, Day 1 ☐ Practice Test – 4.1 & 4.2	
Week 10, Day 2 ☐ Test - 4.1 & 4.2	Score:
Week 10. Day 3 ☐ 5.1.1 Using Transformations to Graph Quadratic Functions (15:57) ☐ 5.1.2 Properties of Quadratic Functions in Standard Form (12:22)	
Week 10. Day 4 5.1.3 Solving Quadratic Equations by Graphing and Factoring (14:11)	
Week 10, Day 5 5.1.4 Completing the Square (16:45)	

Week 11 5.1 Quadratic Functions and Complex Numbers (Cont.) ◆ 5.2 Applying Quadratic Functions

Assignments	Notes
Week 11, Day 1 ☐ 5.1.5 Complex Numbers and Roots (11:18) ☐ 5.1.6 The Quadratic Formula (14:29)	
Week 11, Day 2 5.1 Review Worksheet: Quadratic Functions and Complex Numbers, Parts 1 and 2	
Week 11, Day 3 ☐ Quiz - 5.1	Score:
Week 11, Day 4 ■ 5.2.1 Solving Quadratic Inequalities (16:29)	
Week 11. Day 5 ■ 5.2.2 Curve Fitting with Quadratic Models (10:57)	

Week 12 5.2 Applying Quadratic Functions (Cont.) ◆ Test – 5.1 & 5.2

Assignments	Notes
Week 12, Day 1 ☐ 5.2.3 Operations with Complex Numbers (20:32)	
Week 12, Day 2 ☐ 5.2 Review Worksheet: Applying Quadratic Functions	
Week 12, Day 3 ☐ Quiz - 5.2	Score:
Week 12, Day 4 ☐ Practice Test – 5.1 & 5.2	
Week 12, Day 5 ■ Test - 5.1 & 5.2	Score:

Week 13 6.1 Operations with Polynomials

Assignments	Notes
Week 13, Day 1 ☐ 6.1.1 Polynomials (15:05)	
Week 13, Day 2 ☐ 6.1.2 Adding and Subtracting Polynomials (16:07)	
Week 13, Day 3 6.1.3 Multiplying Polynomials (29:35)	
Week 13, Day 4 6.1.4 Factoring Polynomials (29:30)	
Week 13, Day 5 6.1.5 Dividing Polynomials (15:30)	

Week 14 6.1 Operations with Polynomials (Cont.) ◆ 6.2 Roots and Graphs of Polynomial Functions

Assignments	Notes
Week 14, Day 1 6.1.6 Synthetic Division and the Remainder and Factor Theorems (37:50)	
Week 14, Day 2 6.1 Review Worksheet: Operations with Polynomials, Parts 1 and 2	
Week 14, Day 3 ☐ Quiz - 6.1	Score:
Week 14, Day 4 6.2.1 Finding Real Roots of Polynomial Equations (18:10)	
Week 14, Day 5 6.2.2 Fundamental Theorem of Algebra (20:37)	

Week 15 6.2 Roots and Graphs of Polynomial Functions (Cont.)

Assignments	Notes
Week 15, Day 1 ☐ 6.2.3 Investigating Graphs of Polynomial Functions (20:05)	
Week 15, Day 2 ☐ 6.2.4 Transforming Polynomial Functions (17:23)	
Week 15, Day 3 ☐ 6.2.5 Curve Fitting with Polynomial Models (15:34)	
Week 15, Day 4 6.2 Review Worksheet: Roots and Graphs of Polynomial Functions, Parts 1 and 2	
Week 15, Day 5 Quiz − 6.2	Score:

Week 16 Test − 6.1 & 6.2 ◆ 7.1 Exponential Functions and Logarithms

Assignments	Notes
Week 16, Day 1 ☐ Practice Test – 6.1 & 6.2	
Week 16, Day 2 ☐ Test - 6.1 & 6.2	Score:
Week 16, Day 3 7.1.1 Exponential Functions, Growth, and Decay (15:14)	
Week 16, Day 4 ☐ 7.1.2 Inverses of Relations and Functions (18:36)	
Week 16, Day 5 ☐ 7.1.3 Logarithmic Functions (20:29)	

Week 17 7.1 Exponential Functions and Logarithms (Cont.) 7.2 Applying Exponential and Logarithmic Functions

Assignments	Notes
Week 17, Day 1 ☐ 7.1.4 Properties of Logarithms (21:14)	
Week 17, Day 2 ☐ 7.1 Review Worksheet: Exponential Functions and Logarithms	
Week 17, Day 3 ☐ Quiz - 7.1	Score:
Week 17, Day 4 7.2.1 Exponential and Logarithmic Equations and Inequalities (26:15)	
Week 17, Day 5 ☐ 7.2.2 The Natural Base, e (16:51)	

Week 18 7.2 Applying Exponential and Logarithmic Functions (Cont.) ◆ Test − 7.1 & 7.2

Assignments	Notes
Week 18, Day 1 ☐ 7.2.3 Transforming Exponential and Logarithmic Functions (21:26) ☐ 7.2.4 Curve Fitting With Exponential and Logarithmic Models (8:52)	
Week 18, Day 2 ☐ 7.2 Review Worksheet: Applying Exponential and Logarithmic Functions	
Week 18, Day 3 ☐ Quiz - 7.2	Score:
Week 18, Day 4 ☐ Practice Test - 7.1 & 7.2	
Week 18, Day 5 ☐ Test - 7.1 & 7.2	Score:

Week 19 Exam – Modules 1-17 8.1 Rational Functions

Assignments	Notes
Week 19, Day 1 ☐ Practice Exam – Modules 1-17	
Week 19, Day 2 ■ Exam – Modules 1-17	Score:
Week 19, Day 3 ■ 8.1.1 Variation Functions (27:15)	
Week 19, Day 4 ■ 8.1.2 Multiplying and Dividing Rational Expressions (29:28)	
Week 19, Day 5 ■ 8.1.3 Adding and Subtracting Rational Expressions (33:08)	

Assignments	Notes
Week 20, Day 1 ■ 8.1.4 Rational Functions (31:31)	
Week 20, Day 2 ■ 8.1.5 Solving Rational Equations and Inequalities (32:37)	
Week 20, Day 3 ■ 8.1 Review Worksheet: Rational Functions, Parts 1 and 2	
Week 20, Day 4 ☐ Quiz - 8.1	Score:
Week 20, Day 5 8.2.1 Radical Expressions and Rational Exponents (22:05)	

Week 21 8.2 Radical Functions (Cont.)

Assignments	Notes
Week 21, Day 1 ■ 8.2.2 Radical Functions (25:02)	
Week 21, Day 2 8.2.3 Solving Radical Equations and Inequalities (28:42)	
Week 21, Day 3 ■ 8.2 Review Worksheet: Radical Functions	
Week 21, Day 4 ☐ Quiz - 8.2	Score:
Week 21, Day 5 Practice Test – 8.1 & 8.2	

Week 22 Test − 8.1 & 8.2 ◆ 9.1 Functions and Their Graphs

Assignments	Notes
Week 22, Day 1 ☐ Test - 8.1 & 8.2	Score:
Week 22, Day 2 ☐ 9.1.1 Multiple Representations of Functions (18:25)	
Week 22, Day 3 ☐ 9.1.2 Piecewise Functions (19:14)	
Week 22, Day 4 9.1.3 Transforming Functions (16:10)	
Week 22, Day 5 ☐ 9.1 Review Worksheet: Functions and Their Graphs	

Week 23 9.1 Functions and Their Graphs (Cont.)

9.2 Functional Relationships

Assignments	Notes
Week 23, Day 1 Quiz - 9.1	Score:
Week 23, Day 2 9.2.1 Operations with Functions (18:26)	
Week 23, Day 3 9.2.2 Functions and Their Inverses (12:24)	
Week 23, Day 4 9.2.3 Modeling Real-World Data (16:59)	
Week 23, Day 5 9.2 Review Worksheet: Functional Relationships	

Week 24 9.2 Functional Relationships (Cont.) ◆ Test – 9.1 & 9.2 ◆ 10.1 Understanding Conic Sections

Assignments	Notes
Week 24, Day 1 ☐ Quiz - 9.2	Score:
Week 24, Day 2 ☐ Practice Test – 9.1 & 9.2	
Week 24, Day 3 ☐ Test - 9.1 & 9.2	Score:
Week 24, Day 4 10.1.1 Introduction to Conic Sections (15:39)	
Week 24, Day 5 ■ 10.1.2 Circles (14:57)	

Week 25 10.1 Understanding Conic Sections (Cont.)

Assignments	Notes
Week 25, Day 1 ■ 10.1.3 Ellipses (21:23)	
Week 25, Day 2 ■ 10.1.4 Hyperbolas (22:36)	
Week 25, Day 3 ■ 10.1.5 Parabolas (23:03)	
Week 25, Day 4 ☐ 10.1 Review Worksheet: Understanding Conic Sections, Parts 1 and 2	
Week 25, Day 5	Score:

Week 26 10.2 Applying Conic Sections

Assignments	Notes
Week 26, Day 1 10.2.1 Identifying Conic Sections (22:23)	
Week 26, Day 2 ■ 10.2.2 Solving Nonlinear Systems (27:11)	
Week 26, Day 3 ■ 10.2 Review Worksheet: Applying Conic Sections	
Week 26, Day 4 ☐ Quiz – 10.2	Score:
Week 26, Day 5 ☐ Practice Test – 10.1 & 10.2	

Week 27 Test – 10.1 & 10.2 11.1 Probability

Assignments	Notes
Week 27, Day 1 ■ Test – 10.1 & 10.2	Score:
Week 27, Day 2 11.1.1 Permutations and Combinations (17:53)	
Week 27, Day 3 11.1.2 Theoretical and Experimental Probability (19:07)	
Week 27, Day 4 11.1.3 Independent and Dependent Events (20:57)	
Week 27, Day 5 ■ 11.1.4 Compound Events (20:25)	

Week 28 11.1 Probability (Cont.) • 11.2 Data Analysis and Statistics

Assignments	Notes
Week 28, Day 1 11.1 Review Worksheet: Probability	
Week 28, Day 2	Score:
Week 28, Day 3 ■ 11.2.1 Measures of Central Tendency and Variation (18:46)	
Week 28, Day 4 11.2.2 Binomial Distributions (14:46)	
Week 28, Day 5 11.2 Review Worksheet: Data Analysis and Statistics	

Week 29 11.2 Data Analysis and Statistics (Cont.) ◆ Test – 11.1 & 11.2 ◆ 12.1 Exploring Arithmetic Sequences and Series

Assignments	Notes
Week 29, Day 1	Score:
Week 29, Day 2 ☐ Practice Test – 11.1 & 11.2	
Week 29, Day 3 ☐ Test - 11.1 & 11.2	Score:
Week 29, Day 4 12.1.1 Introduction to Sequences (20:03)	
Week 29, Day 5 ■ 12.1.2 Series and Summation Notation (18:22)	

Week 30 12.1 Exploring Arithmetic Sequences and Series (Cont.) ◆ 12.2 Exploring Geometric Sequences and Series

Assignments	Notes
Week 30, Day 1 12.1.3 Arithmetic Sequences and Series (21:03)	
Week 30, Day 2 ☐ 12.1 Review Worksheet: Exploring Arithmetic Sequences and Series	
Week 30, Day 3 ☐ Quiz – 12.1	Score:
Week 30, Day 4 12.2.1 Geometric Sequences and Series (19:27)	
Week 30, Day 5 ■ 12.2.2 Mathematical Induction and Infinite Geometric Series (22:13)	

Week 31 12.2 Exploring Geometric Sequences and Series (Cont.) ◆ Test − 12.1 & 12.2 ◆ 13.1 Introduction to Trigonometric Functions

Assignments	Notes
Week 31, Day 1 ■ 12.2 Review Worksheet: Exploring Geometric Sequences and Series	
Week 31, Day 2	Score:
Week 31, Day 3 ☐ Practice Test – 12.1 & 12.2	
Week 31, Day 4 ☐ Test - 12.1 & 12.2	Score:
Week 31, Day 5 ■ 13.1.1 Right-Angle Trigonometry (20:03)	

Week 32 13.1 Introduction to Trigonometric Functions (Cont.)

Assignments	Notes
Week 32, Day 1 ■ 13.1.2 Angles of Rotation (22:19)	
Week 32, Day 2 ☐ 13.1.3 The Unit Circle (23:28)	
Week 32, Day 3 ☐ 13.1.4 Inverses of Trigonometric Functions (18:18)	
Week 32, Day 4 ■ 13.1 Review Worksheet: Introduction to Trigonometric Functions, Parts 1 and 2	
Week 32, Day 5 ☐ Quiz - 13.1	Score:

Week 33 13.2 Applying Trigonometric Functions

Assignments	Notes
Week 33, Day 1 ■ 13.2.1 The Law of Sines (23:49)	
Week 33, Day 2 ■ 13.2.2 The Law of Cosines (21:39)	
Week 33, Day 3 ■ 13.2 Review Worksheet: Applying Trigonometric Functions	
Week 33, Day 4 ☐ Quiz - 13.2	Score:
Week 33, Day 5 ☐ Practice Test – 13.1 & 13.2	

Week 34 Test − 13.1 & 13.2 ◆ 14.1 Exploring Trigonometric Graphs

Assignments	Notes
Week 34, Day 1 ☐ Test - 13.1 & 13.2	Score:
Week 34, Day 2 ■ 14.1.1 Graphs of Sine and Cosine (14:37)	
Week 34, Day 3 14.1.2 Graphs of Other Trigonometric Functions (12:21)	
Week 34, Day 4 14.1 Review Worksheet: Exploring Trigonometric Graphs	
Week 34, Day 5 Quiz – 14.1	Score:

Week 35 14.2 Trigonometric Identities

Assignments	Notes
Week 35, Day 1 ■ 14.2.1 Fundamental Trigonometric Identities (12:23)	
Week 35, Day 2 ☐ 14.2.2 Sum and Difference Identities (28:46)	
Week 35, Day 3 ☐ 14.2.3 Double-Angle and Half-Angle Identities (23:27)	
Week 35, Day 4 14.2.4 Solving Trigonometric Equations (15:59)	
Week 35, Day 5 ■ 14.2 Review Worksheet: Trigonometric Identities	

Week 36 14.2 Trigonometric Identities (Cont.) ◆ Test – 14.1 & 14.2 ◆ Exam – Modules 19-35

Assignments	Notes
Week 36, Day 1 Quiz – 14.2	Score:
Week 36, Day 2 ☐ Practice Test – 14.1 & 14.2	
Week 36, Day 3 Test - 14.1 & 14.2	Score:
Week 36, Day 4 Practice Exam – Modules 19-35	
Week 36, Day 5 ■ Exam – Modules 19-35	Score: